



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,748	08/30/2001	Hiroki Nakahara	9319S-000262	8473

27572 7590 03/27/2003

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER

RAO, SHRINIVAS H

ART UNIT	PAPER NUMBER
----------	--------------

2814

DATE MAILED: 03/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/943,748

Applicant(s)

NAKAHARA ET AL.

Examiner

Steven H. Rao

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of paper submitted under 35 U.S.C. 119(a)-(d), from Japanese Patent Application Nos. 2000-265594 filed on September 01, 2000 and 2001-236576 filed on August 03, 2001 which papers have been placed of record in the file.

Drawings

The drafts person has objected to the drawings for the reasons set out in the enclosed PTO-948.

Figure 8 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2814

Claims 1-2, 6,8 to 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPR (Applicants' admitted Prior Art shown at least in figure 8 and specification pages 2 and 3, hereinafter AAPR) and further in view of Masaki et al. (U.S. Patent No. 6,271,907, herein after Masaki).

With respect to claim 1, AAPR describes a method of manufacturing a liquid crystal display having a liquid crystal panel with a liquid crystal sealed in liquid crystal sealing-in areas disposed between a pair of substrates comprising the steps of: a liquid crystal injecting step of injecting a liquid crystal from a liquid crystal injection port into said liquid crystal sealing-in areas. (AAPR fig. 8), an end-sealing material applying step of applying an uncured end-sealing material to said liquid crystal injection port after injecting the liquid crystal. (AAPR fig. 8), an end sealing removal step of removing at least part of said end-sealing material bleeding outside a contour of said liquid crystal panel (AAPR fig. 8).

AAPR does not specifically describe an end sealing material curing step of curing said end-sealing material after said end-sealing material removing step.

However, Masaki, in col. 8 lines 25-30 describes an end sealing material curing step of curing said end-sealing material after said end-sealing material removing step to avoid any interaction between the extra sealant present and the liquid crystal material.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include Masaki's curing step after the removal in AAPR's method to avoid any interaction between the extra sealant present and the liquid crystal material.

With respect to claim 2, AAPR does not specifically describe wherein said end-sealing material removing step includes a step of absorbing said end-sealing material by bringing an absorbent material in contact with said end-sealing material and absorbing said end-sealing material by said absorbent material. (Masaki col. 11 lines 14-15, Masaki col.6 and figs. 11A and 11 B).

With respect to claim 6, wherein the AAPR describes a method of manufacturing a liquid crystal display having a liquid crystal panel with a liquid crystal sealed in liquid crystal sealing-in areas disposed between a pair of substrates comprising the steps of: a liquid crystal injecting step of injecting a liquid crystal from a liquid crystal injection port into said liquid crystal sealing-in areas. (AAPR fig. 8), an end-sealing material applying step of applying an uncured end-sealing material to said liquid crystal injection port after injecting the liquid crystal. (AAPR fig. 8).

AAPR does not specifically describe the step of "a wiping step of wiping at least a part of said end-sealing material bleeding outside of the contour of said liquid crystal panel by a wiping jig.

However, However Masaki in col. 11 lines 14-15 describes wiping off the excess material with a cotton swab to remove only the excess material and without removing any other material like flattening film and /or color filters during the wiping and absorbing operations.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include Masaki's step of wiping with absorbing material in AAPR's method to remove only the excess material and without removing any other

Art Unit: 2814

material like flattening film and /or color filters during the wiping and absorbing operations. (Masaki col.6 and figs. 11A and 11 B).

The last remaining step of claim 6, namely an end-sealing material curing step of curing said end-sealing material after said wiping step. (Masaki col. 11 lines 14-15).

Further it is well settled law that selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results. (In re Bruhuas, 154 F.2d 690, 69 USPQ 330 (CCPA 1946), see also Ex parte Rubin 126 USPQ 440 (BAPI 1959).

Claim 8 repeats the steps of claims 1 and 4.

With respect to claim 9 repeats the steps of claims 1 and 4.

With respect to claim 10, it repeats the steps of claims 1,4 and 8 and is rejected for reasons stated above

With respect to claim 12, it repeats the steps of claims 1 and 4 and is rejected for reasons stated above.

B. Claims 3 to 5, 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPR (Applicants' admitted Prior Art shown at least in figure 8 and specification pages 2 and 3, hereinafter AAPR) and Masaki et al. (U.S. Patent No. 6,271,907, herein after Masaki) as applied to claims 1-2 above and further in view of Forlini et al. (U.S. Patent No. 3,744,126, herein after Forlini).

With respect to claim 3, wherein said end-sealing material removing step includes a step of sucking said end-sealing material by bringing a suction jig into contact

Art Unit: 2814

with said end-sealing material and sucking said end-sealing material into said sucking jig.

With respect to claim 4, wherein the end-sealing material removing step further includes a step of troweling off said end -sealing material along an end face of said liquid crystal panel where said liquid crystal injection port is arranged by a troweling jig after sucking said end-sealing material by said suction jig. (Forilini col.4 lines 22-23).

With respect to claim 5, wherein a step of increasing a pressure inside said liquid crystal sealing-in areas of said liquid crystal panel before said liquid crystal injecting step and a step of evacuating said liquid crystal sealing-in areas after said end-sealing material applying step and before said end-sealing material removing step. (Forilini col. 4 lines 39-40).

With respect to claim 7, wherein the step of increasing a pressure inside said liquid crystal sealing-in areas of said liquid crystal panel before said liquid crystal injecting step and a step of evacuating said liquid crystal sealing-in areas after said end-sealing material applying step before said end-sealing material wiping step. (Forilini col. 4 lines 39-40).

With respect to claim 11, it repeats the steps of claims 1 and 6 and is rejected for reasons stated above.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Steven H. Rao whose telephone number is (703) 306-5584. The examiner can normally be reached on Monday- Friday from approximately 7:00 a.m. to 5:30 p.m.

Art Unit: 2814

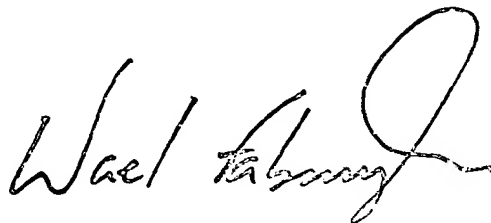
Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956. The Group facsimile number is (703) 308-7724.



Steven H. Rao

Patent Examiner.

March 18, 2003.



SUPERVISORY PRIMARY EXAMINER
TECHNOLOGY CENTER 2000